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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/628,343 | 07/29/2003 | Kentaro Torii | 240991US2RD | 3690 |

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| EXAMINER | |
|---|---|
| RAPP, CHAD | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2125 | |

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/628,343 | TORII ET AL. | |
| | Examiner | Art Unit | |
| | Chad Rapp | 2125 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *29 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,2,6,10-14 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6,10,12,13 and 23* is/are rejected.

7)☒ Claim(s) *2,11 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/29/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1, 2, 6, 10-14 and 23 are presented for examination.

***Allowable Subject Matter***

2. Claims 2, 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Hogge et al.

Ito teaches the claimed invention (claims 1 and 6) substantially as claimed including production control system for producing products from parts, the production control system comprising:

a. A product data obtaining module configured to obtain product data including an effective surplus production quantity from a parent product production location, which is a location producing parent products using the products as their direct parts is taught as the database at producing point one has a surplus item information of surplus products(abstract and col. 3 lines 54-68);

b. A part data obtaining module configured to obtain part data including a surplus production quantity from a part production location producing the parts is taught as database of

second producing point has surplus item information of surplus parts(abstract and col. 3 lines 54-68);

c. A part data transmission module configured to transmit part data including an effective surplus production quantity of the production department to the part production location is taught as producing point two includes a transmission/reception equipment(col. 3 lines 62-64);

d. A product data transmission module configured to transmit product data including a surplus production quantity of their products to the parent production location is taught as producing point one includes transmission/reception equipment(col. 3 lines 59-60).

Ito teaches the above listed details of the independent claims 1 and 6, however, Ito does not teach: an effective surplus production quantity calculation module configured to calculate an effective surplus production quantity of a production department which produces the products from the parts based on the effective surplus production quantity and the surplus production quantity.

Hogge et al. teaches :

a. An effective surplus production quantity calculation module configured to calculate an effective surplus production quantity of a production department which produces the products from the parts based on the effective surplus production quantity and the surplus production quantity is taught as calculating the produced quantity of products(col. 7 lines 23-27).

It would have been obvious of one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Ito with the teachings of Hogge et al. because it allows more efficiently to prepare output plans for manufacturing activity. Factories are able to

utilize accurate information to availability or parts, production facilities and capacity. Thus it provides more efficient generation of plans and schedules for factories.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 10, 12 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Hogge et al.

Ito teaches the claimed invention (claims 10 and 23) substantially as claimed including a production control method for producing products from parts, the method comprising:

a. Obtaining product data including an effective surplus production quantity from a parent product production location, which is a location producing parent products using the products as their direct parts is taught as the database at producing point one has a surplus item information of surplus products(abstract and col. 3 lines 54-68);

b. Obtaining part data including a surplus production quantity from a part production location producing the parts is taught as database of second producing point has surplus item information of surplus parts(abstract and col. 3 lines 54-68);

c. Transmitting part data including an effective surplus production quantity of the production department to the part production location is taught as producing point two includes a transmission/reception equipment(col. 3 lines 62-64).

Ito teaches the above listed details of the independent claims 1 and 6, however, Ito does not teach: calculating an effective surplus production quantity of a production department, which produces the products from the parts, based on the effective surplus production quantity and the surplus production quantity.

Hogge et al. teaches :

a. Calculating an effective surplus production quantity of a production department, which produces the products from the parts, based on the effective surplus production quantity and the surplus production quantity is taught as calculating the produced quantity of products(col. 7 lines 23-27).

It would have been obvious of one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Ito with the teachings of Hogge et al. because it allows more efficiently to prepare output plans for manufacturing activity. Factories are able to utilize accurate information to availability or parts, production facilities and capacity. Thus it provides more efficient generation of plans and schedules for factories.

As to claim 12, Ito teaches calculating an effective surplus production quantity for each production period in consideration of a lead time taken to complete the products is taught as a stock master information describes supply of each part together with number of part and time period(lead time)(col. 5 lines 49-52).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito in view of Hogge et al. and further in view of Zhang et al. (A macro-Level Scheduling Method Using Lagrangian Relaxation).

Ito and Hogge et al. teach the claimed invention (claims 10 and 23) see paragraph number 6 above.

As to claim 13, Zhang et al. teaches calculating an effective surplus production marginal profit by use of a product of an effective surplus production quantity of the production department for each production period and a marginal profit of the products is taught as using a linear programming model used to find most profitable schedule(page 1 section II. Introduction to page 2 right column line 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made or used to modify the teachings of Ito with the teachings of Zhang et al. because it allows of complete minimization of weighted sums of penalties on product tardiness, earliness, lead time, and resource overload. Minimizing these traits allows the system to become more profitable schedule.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Rapp whose telephone number is (571)272-3752. The examiner can normally be reached on Mon-Fri 11:00-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chad Rapp
Examiner
Art Unit 2125

cjr

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100